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THE

1877

FURST & BRADLEY

MANUFACTURING CO.'S

COLLECTION OF

Valuable Information,

TABLES, RECIPES, ETC.,

FOR 1877.

PRESENTED BY

BLOSS & McNAUGHTON,

AGENTS FOR

Furst & Bradley Manfg. Co.'s

CELEBRATED AGRICULTURAL IMPLEMENTS

AND OTHER FARM MACHINERY,

GALESBURGH, MICH.

CHICAGO:
H. S. TIFFANY, Steam Printer.
1877.

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THE HIGHEST HONORS.

At the Centennial Exposition, Philadelphia, the Committee of Awards, after carefully examining into the merits of the various Plows, Sulky Rakes, and Cultivators from all parts of this country and Europe, awarded us the highest honors obtainable, viz.:

THE GRAND MEDAL OF HONOR

AND



ON EACH OF THE FOLLOWING EXHIBITS:

Furst & Bradley's "Garden City Clipper" Plows.

Furst & Bradley's "Garden City" Sulky and Gang Plows.

Furst & Bradley's Sulky Hay Rake.

Furst & Bradley's Combined Riding and Walking Cultivator.

Furst & Bradley's Wood and Iron Beam Walking Cultivators.

When it is remembered that our goods were shown in competition with all the most prominent manufactures of their class in this country and Europe, the foregoing becomes a most significant fact, sealing the already proclaimed verdict in their favor, of the farmers and dealers throughout the country.

FURST & BRADLEY

MANUFACTURING CO.,

Manufacturers of

PLOWS,

Riding & Walking Cultivators

GANG and SULKY PLOWS,

Sulky Rakes, Harrows, Etc.

OFFICE:

57 to 63 North Desplaines
Street.

WORKS:

56 to 70 North Jefferson and
69 to 77 Fulton Streets.

CHICAGO, ILL,



TO THE FARMER.

Let us give you a few facts about farming implements :

You understand that *all* plows *cannot* be the *best*, and in looking this matter over, have to conclude that if some manufacturer makes the best goods, some other *must* make the poorest. Now *all* manufacturers *claim* to make good goods. How then shall a farmer be able to decide which are first-class goods, thereby saving money, time and temper? Will it do to be guided by appearances? No. Although finish has much to do toward discovering a good plow, yet there are fine looking plows that will not *scour* for want of being properly tempered or shaped. It is just as positively necessary that a plow have a correct shape, as that it be well tempered, to scour or draw easily. These are some of the many things about a plow that a manufacturer must understand before he can make a *good* plow. A farmer may buy a finely finished and a nicely tempered one, and yet it will not scour. Why? Because it isn't the right shape. A difference that is altogether imperceptible to the eye may spoil it. Again a plow may be ever so well

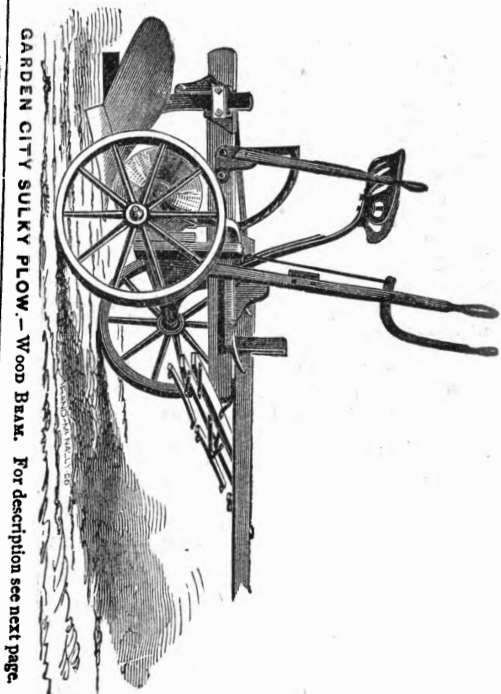
finished and perfectly shaped, but for want of a good temper, be as worthless as a stick. What ought you to do then when you need a plow? You don't want to buy a poor one, no matter if it is *warranted*. Every dealer is *obliged* to warrant his plows, in order to sell them at all, and he may let you take home and bring back half a dozen; but all this takes *time*, and time, with a farmer when he ought to be plowing, is *money*. Besides, after a man has carried back a lot of plows that will not scour, or that run too hard, or don't turn enough, on account of an imperfect shape, or hardness, he not only loses his time but is very likely to lose his temper as well. You should, therefore, first enquire what plow has the best *reputation*. Ask your neighbors—those who have used ours and other plows—and they will tell you that the leading article, in regard to temper, shape and finish, is the "Garden City Clipper." It stands at the head of the list all over the United States.

It is made by the Furst & Bradley Manufacturing Company, of Chicago, who have had twenty-five years experience in the manufacture of Plows, Gang and Sulky Plows, Sulky Rakes, Walking and Riding Cultivators, Harrows, &c., &c. This long experience, together with a determination to make the very best goods in the market, has enabled them to wrest the laurels from all competitors, and their reputation to-day is world-wide, as makers of the finest goods in America.

TABLE

Showing the legal number pounds per bushel of the following articles in the States therein named. A blank space is left opposite an article when the State has passed no law regulating its weight.

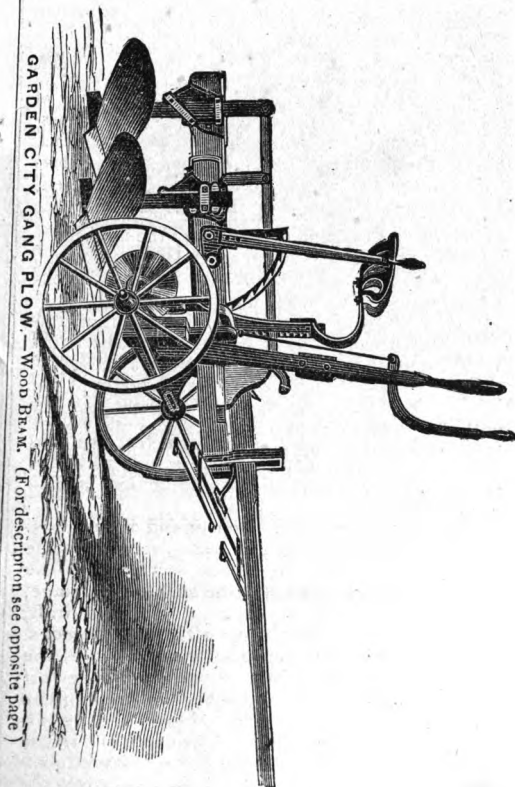
ARTICLES.	Ill	Iowa	Wis	Mich	Ind	Mo	Min	Ohio
Apples, dried.....	24	24	28	28	25	24	28	25
Bran.....	20	20	20	20	20	20	.....	20
Barley.....	48	48	48	48	48	48	48	48
Beans, white.....	60	60	60	60	60	60	.....	60
Beans, castor.....	48	48	48	48	48	48	.....	48
Buckwheat.....	52	52	40	42	50	52	42	52
Broom Corn Seed.....	48	48	48	48	48	48	.....	30
Beets.....	60	60	60	60	60	60	.....	60
Charcoal.....	22	22	22	22	22	22	.....	22
Coal, stone.....	80	80	.....	.....	.....	80	.....	80
Coke.....	40	40	40	40	40	40	.....	40
Corn, shelled.....	56	56	56	56	56	56	56	56
“ ear.....	70	70	70	70	70	70	.....	70
Corn Meal.....	48	48	48	50	50	50	.....	50
Cranberries.....	33	.....	.....	.....	.....	.....	.....	.....
Dried Peaches.....	23	23	28	28	33	33	28	33
“ “ pared.....	40	33	28	28	33	33	.....	36
Flax Seed.....	56	56	56	56	56	56	.....	56
Grass Seed, Blue.....	14	14	14	14	14	10	.....	10
“ “ Clover.....	60	60	60	60	60	60	60	62
“ “ Hungarian..	48	48	48	48	48	48	.....	50
“ “ Millet.....	50	45	50	50	.....	50	.....	50
“ “ Orchard.....	14	14	.....	14	.....	14	.....	14
“ “ Red Top.....	14	14	14	14	14	14	.....	14
“ “ Timothy.....	45	.....	.....	.....	.....	45	.....	45
Hemp Seed.....	44	44	44	44	44	44	.....	42
Malt, Barley.....	34	36	38	38	38	38	.....	34
“ Rye.....	35	.....	.....	.....	.....	.....	.....	34
Mineral Coal.....	40	.....	.....	.....	70	.....	.....	.....
Middlings, fine.....	40	.....	.....	.....	.....	.....	.....	.....
“ coarse.....	30	.....	.....	.....	.....	.....	.....	.....
Oats.....	32	33	32	32	32	35	32	30
Onions.....	57	57	57	56	57	57	.....	56
Onion tops.....	28	28	28	28	28	28	.....	25
Osage Orange.....	33	.....	.....	.....	.....	.....	.....	.....
Parsnips.....	55	.....	.....	.....	.....	.....	.....	.....
Potatoes.....	60	60	60	60	60	60	60	60
“ sweet.....	55	55	54	55	55	50	.....	55
Pop Corn.....	70	.....	.....	.....	.....	.....	.....	.....
Quick Lime.....	80	80	80	80	80	80	.....	.....
Rye.....	56	56	56	56	56	56	56	56
Seed, Sorghum.....	46	.....	.....	.....	.....	.....	.....	.....
Salt, coarse.....	50	50	50	50	50	50	.....	50
“ fine.....	55	50	56	56	56	50	.....	50
Turnips.....	55	55	55	55	55	55	.....	56
Wheat.....	60	60	60	60	60	60	60	60



The cuts on pages 5 and 7 represent our WOOD BEAM SULKY AND GANG PLOWS. They have now been in the market for eleven years, and during that time, thousands upon thousands of them have been sold and put to the most thorough and critical tests by the farming community, until they have come to be acknowledged the leading or standard plow of this country. Twenty-five first premiums and thousands of farmers' recommendations attest the fact. Most of the points that have combined to place them at the head of the list, are possessed by none others. One of these is the brake on the wheel, which, when applied, lifts the plow out of the ground *by the power of the horses*. On account of this arrangement it is very easy to handle, and can be operated all day long by a boy.

As the plow can be quickly detached from the beam, it enables a farmer to use either stubble plows or breakers of any size cut that he may desire, on this same frame, by having them made on a standard that will fit the slotted casting on the beam. He can also regulate his team to suit the size or kind of plow he attaches to the frame, using two, three or four horses. To do this, it is only necessary to move the pole and change eveners, which can be done in five minutes.

By a very simple device, the rear end of the plow is tilted up whenever it is necessary to back while plowing in the field. The team is hitched to the end of the beam, instead of to the tongue or carriage, consequently there cannot be a pound of side draft, neither is there any weight upon the horses' necks. Owing to the peculiar construction of the axle, the lowering of the plow into the ground throws the furrow wheel down and the land wheel up, keeping the plow level, thereby avoiding all the trouble of leveling up with levers or screws. The depth of furrow can be instantly changed by the driver, without getting off or stopping the horses. It can also be readily adjusted to take more or less land.



GARDEN CITY GANG PLOW.—Wood Beam. (For description see opposite page)

HOW TO GET RID OF HOUSE-HOLD PESTS.

Mercury exterminates fleas and bugs, but I think cleanliness the best and perhaps the only preventive. The common house-fly I do not molest, believing that it more than compensates for its trouble by clearing the atmosphere of effluvia and the animalcules which always arise from the putrefaction of decaying substances during warm weather.

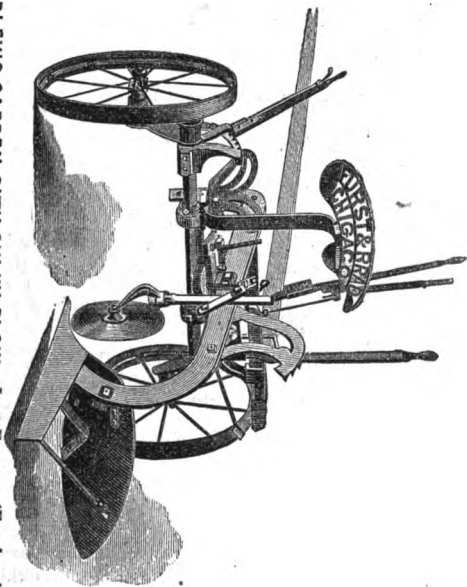
For the residue of insects that infest my vegetable garden, I find that the laboratory of the chemist furnishes materials fatal to them all, among which white hellebore and cayenne pepper are of the most utility. The bug or worm which cannot find vegetation unflavored with these articles will seek its breakfast elsewhere and leave a garden unmolested.

A few drops of carbolic acid in a pint of water will clean house plants of lice in a very short time. If mosquitoes or other blood-suckers infest our sleeping rooms at night, we uncork a bottle of pennyroyal, and these insects leave in great haste, nor will they return so long as the air in the room is loaded with the fumes of that aromatic herb. If rats enter the cellar, a little powdered potash thrown into their holes, or mixed with meal and scattered in their runways, never fails to drive them away.

THE WIRE WORM.

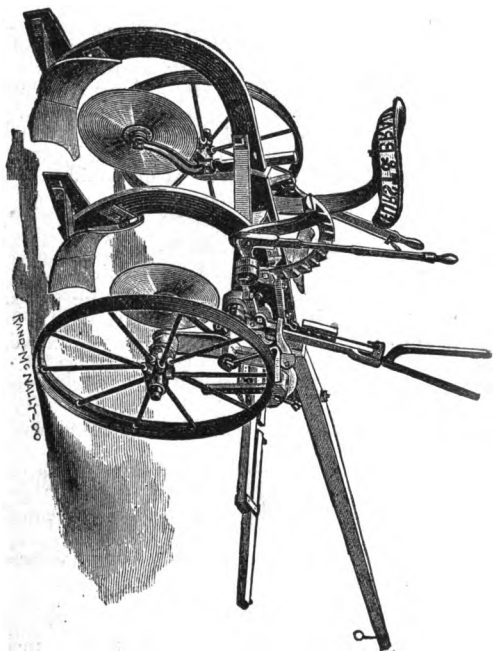
J. M., a Country Gentleman, states that he soaked his seed corn in a solution of copperas and saltpetre, using a quarter of a pound of each to a bushel of ears of light corn. All his seed thus treated grew, and none was lost by the wire worms, and now he always soaks his corn in this solution for twelve hours before planting. He has also observed that he never has been troubled with the cut worm since thus treating his seed corn.

FURST & BRADLEY'S GARDEN CITY SULKY PLOW.—IRON FRAME. (For description see next page.)



The cuts on pages 9 and 11 represent our IRON BEAM GANG and SULKY PLOWS, which have been brought to a high state of perfection by patient study and thorough tests. They contain all the essential points of the wood beam Gang and Sulky, for description of which see page 6. Although they are light in comparison with others, the beams are much stronger than most iron beam Sulky and Gang Plows. They are extremely simple and thoroughly effective. Any boy that is capable of managing the horses, can handle this plow all day long, as well as a man, simply because you have only to put the brake on to the wheel to throw the plow out of the ground, instead of pulling it out by main force, as is the case with most other plows.

We use three horses on the Sulky Plow, and either three or four on the Gang, according to a man's taste, or the size of his horses.



FURST & BRADLEY GARDEN CITY GANG PLOW.

IRON FRAME.

(For description see opposite page.)

AN EFFECTUAL SCARECROW.

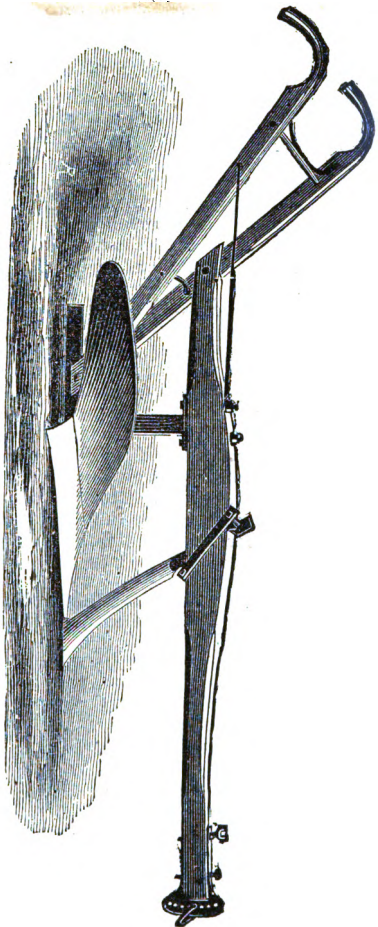
Decidedly the best scarecrow that has ever been tried, is made by taking a medium size, egg-shaped potato, sticking into it long wing feathers from chickens at each side, for wings, and others spread out, fan-shaped, at one end for a tail. A wooden head may also be whittled out and stuck on, making the whole look like a large bird. By sticking a peg in the back, to which a string is tied, and suspending it from a cross piece on a high pole, all birds will be effectually frightened off, as they will take it for a hawk. One in a field or vineyard of considerable size will fully answer the purpose.

WET GRAIN.

Many farmers are vexed and tried with wet and damp grain, and others are deterred from threshing out of the shock, from their fears of injury to the grain while in the bin.

The remedy for these troubles is a few stones scattered through the bin, or better yet, a few bricks. They will absorb the moisture and the grain will come out like shot. Try it, brother farmers, there is no patent on it.

GUNS AND RIFLES may be easily cleaned from lead by the following: If a muzzle loader, stop up the nipple or communication hole with a little wax, or, if a breech-loader, insert a cork in the breech rather tightly; next pour some quicksilver into the barrel, and put another cork in the muzzle, then proceed to roll it up and down the barrel, shaking it about for a few minutes. The mercury and the lead will form an amalgam, and leave the barrel as clean and free from lead as the first day it came out of the shop. The same quicksilver can be used repeatedly, by straining it through wash leather; for the lead will be left behind in the leather, and the quicksilver will be again fit for use.



COMMON PRAIRIE BREAKER.—SIZES, 10 to 20 inches.

These Plows have an extra Share and Standing Coulter. They are made for breaking up prairie or tough tame sod, and are models of beauty. The Share is quite broad and flat, which improves the cutting qualities and makes them draw very much easier than those which have a more abruptly turned Share. Our Mouldboard has that curve peculiar to our Breaker, and is just large enough to turn the furrow slice beautifully, with no surplus surface to increase draft by useless weight or friction. They are intended to run from 2 to 5 inches deep.

TO PRESERVE POSTS.

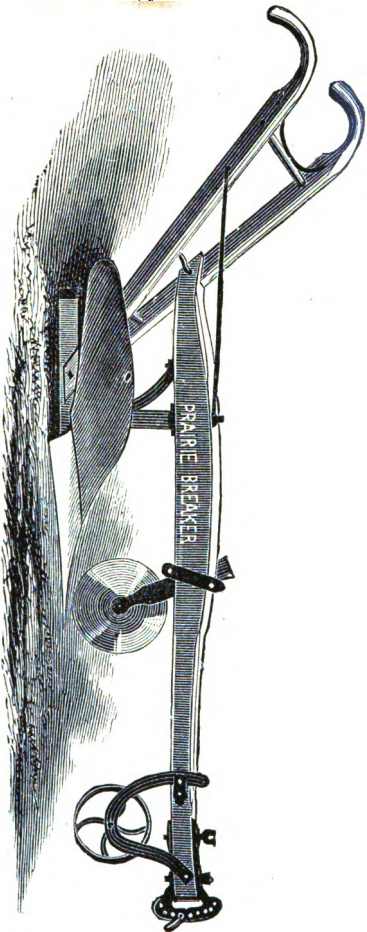
The American Chemist says that a Western farmer discovered many years ago that wood could be made to last longer than iron in the ground. Time and weather, he says, seem to have no effect on it. The posts can be prepared for less than two cents a-piece. This is the recipe: Take boiled linseed oil and stir into it pulverized charcoal to the consistency of paint. Put a coat of this over the timber, and, he adds, there is not a man who will live to see it rot.

BAG-MARKING INK.

A correspondent of the English Mechanic gives the following recipe for an ink, the permanency of which he says is perfect, even when bags filled with chemical manures have been in rain and sunshine for ten days: Boil 1 lb. of logwood chips in 1 gallon of water, at boiling point, ten minutes; then stir in the eighth of an ounce of bichromate of potash, and boil this ten minutes longer; then add, when cold, $\frac{1}{2}$ lb. of common gum, dissolved, and stir well in. This will flow well from the pen, and will mark bags with either the stencil plate or block. The cost of the above ink is about 12 cents per gallon.

PAINT FOR FARMERS.

A writer in one of our exchanges states that farmers will find the following profitable for house or fence paint: Skim milk, two quarts; fresh slaked lime, eight ounces; linseed oil, six ounces; white Burgundy pitch, two ounces; Spanish white, three pounds. The lime is to be slaked in water exposed to the air, and then mixed with about one-fourth of the milk; the oil in which pitch is dissolved to be added, a little at a time, then the rest of the milk, and afterwards the Spanish white. This is for white paint. If desirable, any other color may be produced; thus, if a cream color is desired, in place of part of the Spanish white use the ochre alone. Farmers wishing to economize in painting fences, or temporary structures, will probably find the above valuable.



EXTRA PRAIRIE BREAKER.—SIZES, 10 to 16 inches.

These Plows have an extra Share, Rolling Coulter and Gauge Wheel. The difference between these and the "Common" Breaker is simply the addition of a Gauge Wheel, and a Rolling instead of a Standing Coulter. They are for the same purpose, and intended to run the same depth as the Common Breaker.

LONG MEASURE.

12 inches.....	I foot.
3 feet.....	I yard.
5½ yards, or 16½ feet.....	I rod.
320 rods, or 1,760 yards, or 5,280 feet.....	I mile.
3 miles (measuring at sea).....	I league.
6 feet (depth of water).....	I fathom.
4 inches (horse measure).....	I hand.

LIQUID MEASURE.

4 gills.....	I pint.
2 pints.....	I quart.
4 quarts.....	I gallon.
31¼ gallons.....	I barrel.
63 gallons.....	I hogshead.

COMMERCIAL WEIGHTS.

16 drams.....	I ounce.
16 ounces.....	I pound.
25 pounds.....	I quarter.
4 quarters.....	I hundred weight.
20 hundred weight.....	I ton.

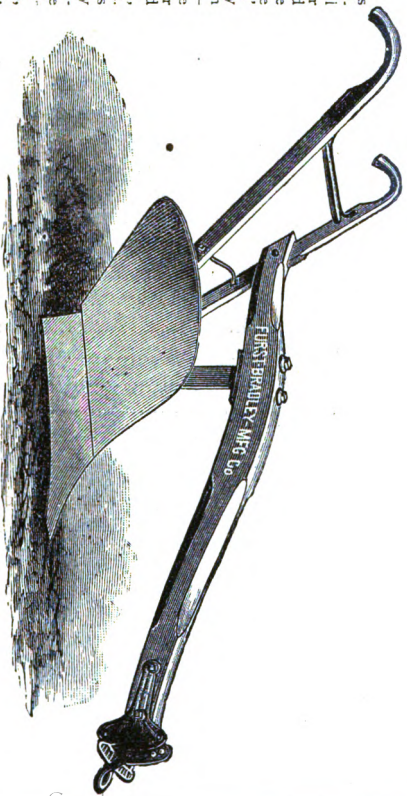
MISCELLANEOUS TABLE.

12 units, or things.....	I dozen.
12 dozen.....	I gross.
20 things.....	I score.
196 pounds.....	I barrel of flour.
200 pounds.....	I barrel of pork.
56 pounds.....	I firkin of butter.
24 sheets of paper.....	I quire.
20 quires of paper.....	I ream.
4 feet wide, 4 feet high, and 8 feet long, }	.....I cord of wood.

These Plows have high Mould-boards, and will effectually cover all stubble and weeds. They are wide in the 'throat' or 'waist' and consequently will leave a clean

open furrow — They have the improved taper landside, and strong, heavy, durable point. Every joint is perfect, and they are nicely finished. They have *hardened* Mould-boards, Shares, and Landsides, and will scour in soils where all others have failed.

All of our Wood Beam Old Ground Plows are made with *adjustable* beams. The 14 and 16 inch Plows have a three-horse clevis, as shown in above cut, so that two or three horses can be used on them.



OLD GROUND PLOW

BUSINESS TABLES.

How to Lay off a Square Acre of Ground.

Measure 209 feet on each side, and you will have a square acre, within an inch.

Contents of an Acre.

An acre contains, 4,840³/₄ square yards.

A square mile contains 640 acres,

Land Measure.

144 square inches.....	1 square foot.
9 square feet.....	1 square yard.
30 ¹ / ₄ square yards.....	1 square rod.
40 square rods.....	1 square rood.
4 square roods.....	1 square acre.
640 square acres.....	1 square mile.

Measures of Distance.

A "Sabbath-day's journey" is 1,155 yards—(this is eighteen yards less than two-thirds of a mile).

A "day's journey" is 33¹/₃ miles.

A cubit is two feet.

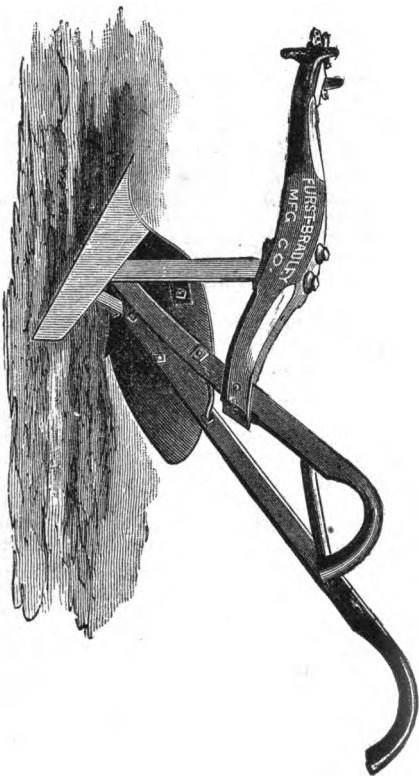
A great cubit is 11 feet.

A palm is 3 inches.

A span is 10⁷/₈ inches.

A pace is 3 feet.

Death is a black camel that kneels before every door.



OLD GROUND PLOW.

The above cut shows our *Improved Medium, or Tapering Landside*, made of Cast Steel, and hardened; also the manner of attaching the Landside handle, which prevents clogging.

THE HOME PHYSICIAN.

Ear-Ache.

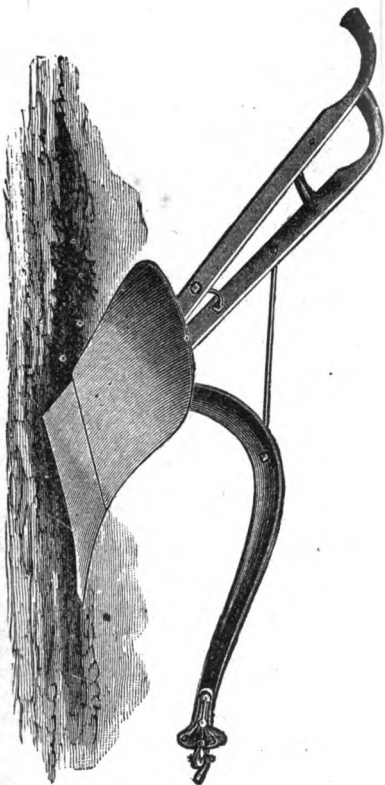
There is scarcely any ache to which children are subject, so bad to bear and difficult to cure, as the ear-ache. But there is a remedy never known to fail. Take a bit of cotton batting, put upon it a pinch of black pepper, gather it up and tie it, dip in sweet oil, and insert it into the ear. Put a flannel bandage over the head to keep it warm. It will give immediate relief. —

To Cure a Felon.

The London *Lancet* suggests the following simple treatment for felons: "As soon as the disease is felt, put directly over the spot a fly blister, about the size of the thumb-nail, and let it remain for six hours, at the expiration of which time, directly under the surface of the blister may be seen the felon, which can instantly be taken out with the point of a needle or a lancet." A piece of adhesive plaster will keep the blister in place. —

Remedy for Poison by Ivy.

It seems to me that I read all kinds of cures for ivy poison except the right one. I have always endeavored to keep it before the public, but have failed. It is to dissolve sugar of lead—a bit the size of a hazelnut—in half a teacup of sweet milk or warm water. Apply as warm as can be easily borne with a soft, linty piece of linen rag. Three or four applications are sufficient to effect a cure. If the poison is on the face and nearing the eyes or mouth, this astringent wash may be constantly applied. It is a marvelous cure, and by watching closely one can see the fevered blisters turn from white to yellow during the application. This remedy for ivy poison should prevent a great deal of suffering. It is well where a member of the family is easily poisoned to keep sugar of lead in the house all the time. Let it be labelled and kept where it can be found the moment it is wanted. Keep it well wrapped up, that it may not lose its strength.—*Gor. Ohio Farmer.*



IRON BEAM PLOW.—Sizes, 14 and 16 inches.

This cut represents the Mouldboard view of our Three-Horse Iron Beam Plows, with three-horse clevis. With the exception of the Beam they are identical in quality, shape and construction with the plow shown on page 17. We now make all of the 14 and 16 inch Plows with a three-horse clevis, so they can be used with either two or three horses.

THE LATEST POSTAGE LAWS.

Letters.

Letters go to any part of the United States or Territories for three cents per half ounce. Prepayment compulsory.

Unpaid letters are sent to the dead letter office at Washington.

Letters weighing over half an ounce, and prepaid at single rate (3 cents), are forwarded to their destination, and the balance due collected on delivery.

Revenue stamps, or stamps cut from stamped envelopes, cannot be used to pay postage.

In directing your letters, write name of county as well as of town or village, unless the direction be to a large city.

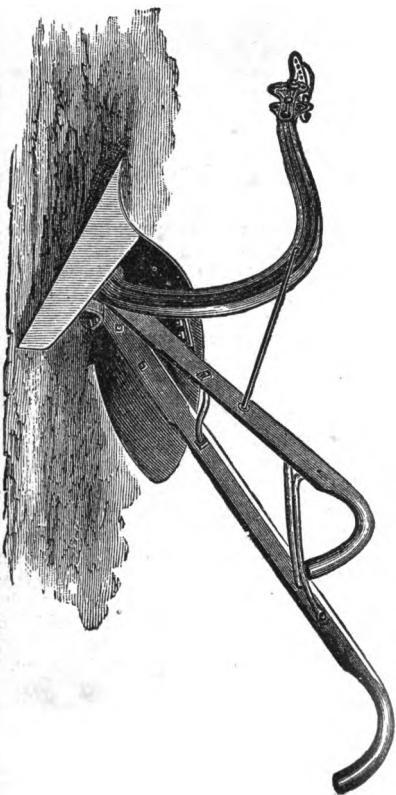
Place postage stamp on the upper right hand corner of your letter.

Manuscript

For publication in Newspapers, Magazines or Periodicals transmitted by mail, must be prepaid at letter rates of postage.

Transient Third-Class Matter.

The rate of postage on all *transient third-class matter*, is as follows: ONE-CENT for every TWO OUNCES, or fractional part thereof, on Pamphlets, occasional publications, transient newspapers, magazines, books, periodicals, hand-bills, posters, sheet music (printed), prospectuses, maps, proof-sheets, regular publications, designed primarily for advertising purposes, or for free circulation at nominal rates, and corrected proof-sheets. On the following the rate is ONE CENT for EACH OUNCE or fractional part thereof. Printed cards and blanks, lithographs, prints, chromo lithographs, engravings, photographs and stereoscopic views, book manuscripts, unsealed circulars, seeds, cuttings, bulbs, roots and scions, flexible patterns, samples of ores, medals, minerals and merchandise, sample cards, photographic paper, letter envelopes, postal envel-



IMPROVED IRON BEAM PLOW.—SIZES, 12 TO 16 INCHES.

The above cut gives a landside view of our Iron Beam Plows, showing the taper landside, and the way we attach the handles, which prevents clogging.

The Latest Postage Laws—Continued.

opes and wrappers, unprinted cards, plain and ornamental paper, card-board or other flexible material, and all other third-class matter not enumerated.

All matter not sent at letter postage, (except seeds in transparent envelopes) must be wrapped or enveloped with open sides or ends; otherwise it will be rated at letter postage.

No article contained in glass can be sent by mail.

The revised rates of foreign postage are now in operation.

POSTAGE TO FOREIGN COUNTRIES.

To Great Britain (including Ireland, Scotland and Wales), Germany, France, Denmark, Norway, Sweden, Holland, Austria, Portugal, Russia and, Switzerland:

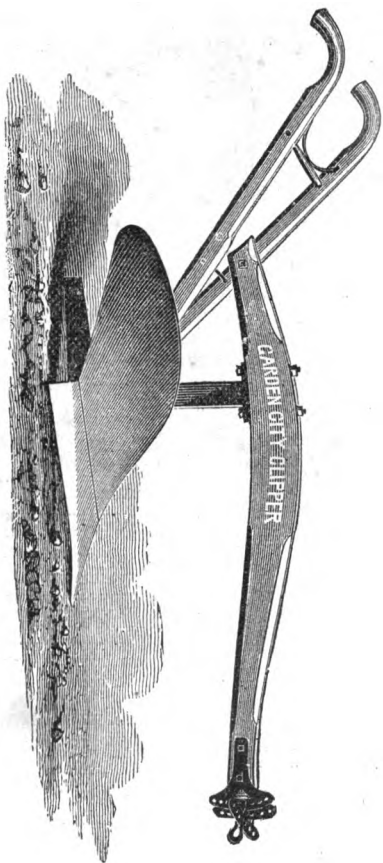
For letters (when prepaid), for every $\frac{1}{2}$ ounce, or fractional part thereof.....	5 cts.
Postal cards.....	2 cts.
Newspapers (prepayment compulsory), for each four ounces or fractional part thereof.....	2 cts.
Books and other printed matter, except newspapers (prepayment compulsory), for each two ounces, or fractional part thereof.....	2 cts.
Samples of merchandise (prepayment compulsory), for each two ounces or fractional part thereof.....	2 cts.

Newspapers and other printed papers unpaid, or insufficiently prepaid cannot be forwarded.

Other articles unpaid or insufficiently prepaid will be charged on delivery as unpaid LETTERS, after deducting the value of the stamps or stamped envelopes employed.

The greatest weight that can be sent in one package of patterns of merchandise is 250 grammes, or $8\frac{3}{4}$ ounces, and the greatest weight of other articles, except letters, is 1000 grammes, or 2 pounds and 3 ounces.

Letters, when not prepaid, will be charged double postage.



STUBBLE AND SOD PLOW.—SIZES, 12 and 14 inches.

These Plows, as the name indicates, are intended to do old ground as well as tame sod plowing. They are a medium between the more bold or abrupt old ground plow and the long, slow turning breaker. They work nicely in old ground, being preferred by some to the regular stubble plow, and turn tame sod, such as Blue Grass, Timothy or Clover, admirably. They are numbered 19½ and 21.

The Latest Postage Laws—Continued.

HOW TO SEND MONEY.

Do not send money in an unregistered letter. Ten cents, in addition to the regular postage, will register a letter to any part of the United States, or to foreign countries. The *best* way to send money is to buy a Money Order, if there is a Money Order Office near you. Money can be sent with absolute safety to all parts of the United States, and to Great Britain, Germany, Switzerland or Canada.

The following are the

Domestic and Foreign Money Order Rates.**DOMESTIC RATES.**

On orders not exceeding \$15.....	\$0 10
Over \$15 and not exceeding \$30.....	15
“ 30 “ “ “ 40.....	20
“ 40 “ “ “ 50.....	25

RATES TO ALL PARTS OF THE GERMAN EMPIRE.

On Orders not exceeding \$5.....	\$0 15
Over \$ 5 and not exceeding \$10.....	25
“ 10 “ “ “ 20.....	50
“ 20 “ “ “ 30.....	75
“ 30 “ “ “ 40.....	1 00
“ 40 “ “ “ 50.....	1 25

RATES TO GREAT BRITAIN.

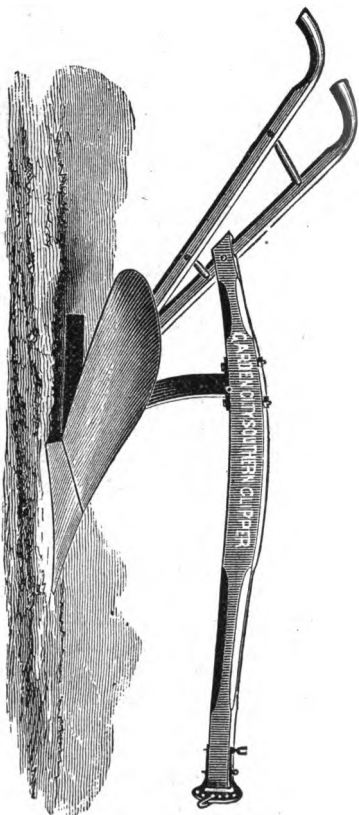
On Orders not exceeding \$10.....	\$0 25
Over \$10 and not exceeding \$20.....	50
“ 20 “ “ “ 30.....	75
“ 30 “ “ “ 40.....	1 00
“ 40 “ “ “ 50.....	1 25

RATES TO SWITZERLAND.

On Orders not exceeding \$10.....	\$0 25
Over \$10 and not exceeding \$20.....	50
“ 20 “ “ “ 30.....	75
“ 30 “ “ “ 40.....	1 00
“ 40 “ “ “ 50.....	1 25

RATES TO CANADA.

On Orders not exceeding \$10.....	\$0 20
Over \$10 and not exceeding \$20.....	40
“ 20 “ “ “ 30.....	60
“ 30 “ “ “ 50.....	1 00

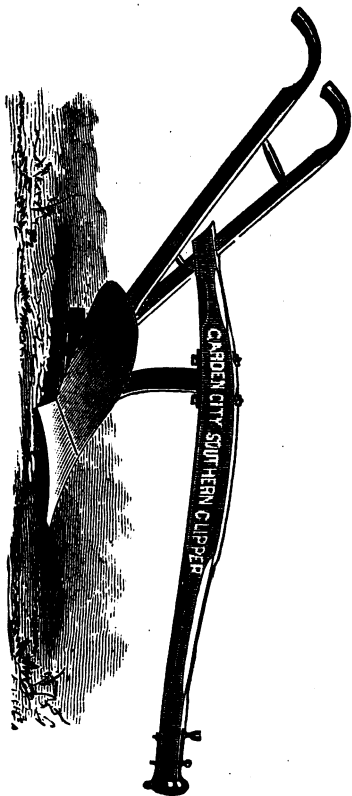


GARDEN CITY SOUTHERN CLIPPER.

This cut represents our Nos. 94, 96, 98 and 99 Garden City Southern Clippers. They are especially made and adapted for the Black Lands of Texas, with sharp cutting angles, and formed in the best possible shape for shedding the dirt. We attach Plows of the same shape to our Gang and Sulky Plows for use in the Black Lands of Texas and other Southern States.

PLANTS TO AN ACRE.

<i>Distance apart.</i>		<i>Number.</i>
3 inches by 3 inches.....		696,960
4 " by 4 "		492,040
6 " by 6 "		174,240
9 " by 9 "		77,440
1 foot by 1 foot.....		43,560
2 " by 1 "		21,780
2 " by 2 "		10,890
3 " by 1 "		14,520
3 " by 2 "		7,250
3 " by 3 "		4,840
4 " by 1 "		10,890
4 " by 2 "		5,445
4 " by 3 "		3,630
4 " by 4 "		2,722
5 " by 1 "		8,712
5 " by 2 "		4,356
5 " by 3 "		2,904
5 " by 4 "		2,178
5 " by 5 "		1,742
6 " by 6 "		1,220
6½ " by 6½ "		1,031
7 " by 7 "		888
8 " by 8 "		680
9 " by 9 "		537
10 " by 10 "		436
11 " by 11 "		360
12 " by 12 "		302
13 " by 13 "		257
14 " by 14 "		222
15 " by 15 "		193



GARDEN CITY SOUTHERN CLIPPER.

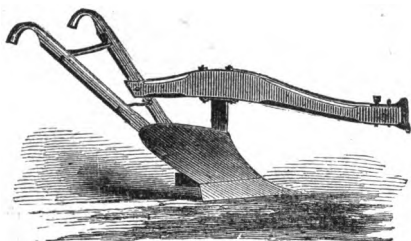
The above cut represents the shape and style of our Nos. 80, 82, 84 and 86 Garden City Southern Clippers. They are adapted for plowing and cultivating in all kinds of soil in Texas and Southern States, but more especially for loamy and sandy ground.

Plants to an Acre—Continued.

<i>Distance apart.</i>	<i>Number.</i>
16 feet by 16 feet.....	170
16½ " by 16½ "	160
17 " by 17 "	150
18 " by 18 "	134
19 " by 19 "	120
20 " by 20 "	108
25 " by 25 "	60
30 " by 30 "	48
33 " by 33 "	40
40 " by 40 "	27
45 " by 45 "	21
50 " by 50 "	17
60 " by 60 "	12
66 " by 66 "	10

BUSINESS MAXIMS FOR BUSINESS MEN

1. After the feast the giver shakes his head.
2. The sleeping fox catches no poultry.
3. Creditors have excellent memories.
4. Caution is the father of security.
5. He who pays beforehand is served behind-hand.
6. If you would know the value of a dollar, try to borrow one.
7. Great bargains have ruined many.
8. Be silent when a fool talks.
9. Give a foolish talker rope enough and he will hang himself.
10. Never speak boastingly of your business.
11. It is hard for the hungry man to wait when he smells the roast meat.



CORN PLOW.

SIZES, 7 to 10 inches.

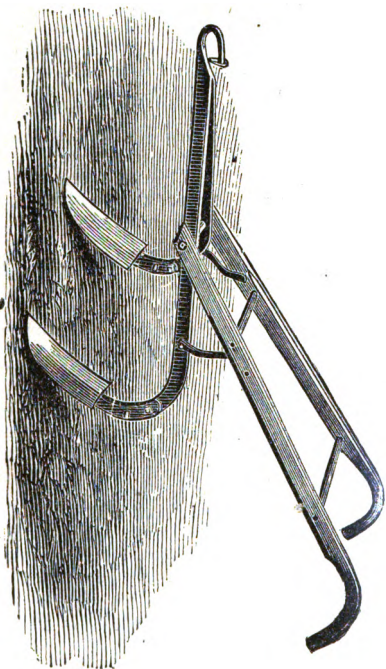
These Plows are made of Cast Steel, with *hardened* Mould-board, and adapted for light plowing, the cultivation of crops, and hilling up.

OAT MEAL FOR CHILDREN.

We see by an article in the *La France Medicale*, that M. Dujardin has been experimenting with oat meal as a food for young children. He made use of a jelly prepared by soaking a tablespoonful of the meal in a glass of water for twelve hours, then straining through a sieve and boiling till the whole assumes the consistence of jelly, and adding sugar or salt to taste. According to analysis, 100 grammes of the meal contains 8.7 grammes of water, 7.5 of fatty matters, 62.5 of starch, 12.5 of nitrogenous matters, 1.5 of mineral substance, and 7.6 of cellulose, dextrine, and loss. Its nutritious value, therefore, as food for children, in regard to nitrogenous or plastic elements, and such as are respiratory, is analogous to that of human milk or cow's milk. Besides these, it contains more iron than do most of the articles of food. Four newly-born infants were fed with the preparation just described, and in every case with satisfactory results. In addition to its qualities as food, it acts efficiently against colic and diarrhea. It enters into the composition of the syrup of Luther, which is said to be much used in Germany. M. Gillette, surgeon of the hospital of Melun, has also given oat meal combined with cow's milk to six children, and finds it to be a valuable food in cases where the natural supply of milk is deficient.—*N. Y. Times*.

ABOUT CHILDREN.

Children are children as kittens are kittens. A sober, sensible old cat, that sits purring before the fire, does not trouble herself because her kitten is hurrying and dashing here and there, in a fever of excitement to catch its own tail. She sits still and purrs on. People should do the same with children. One of the difficulties of home education is the impossibility of making parents keep still; it is with them, out of their affection, all watch and worry.—*[Memoir of C. W. D'ike.]*



IRON BEAM DOUBLE SHOVEL PLOW.

This implement is made for cultivating corn, cotton, potatoes, or anything grown in rows far enough apart to admit of its use. The beams are of iron, and the shovels of cast steel—6 or 7 inches wide, as customers may desire. It is preferred by some farmers to the wood beam, as they claim it is less liable to choke.

A CERTAIN CURE FOR FROSTED FEET AND CHILBLAINS.

For a number of years I have advised your readers to use coal oil or spirits of turpentine for these complaints, and the more frequently they are used, the more perfect and complete does this remedy seem, as well as cheap and in the reach of everyone. Pour the coal oil on the stockings over the affected part, and pour some also into the boots or shoes, soaking the feet completely. It may be repeated once or twice, and this is all that is necessary to do. The cure is both certain and speedy.

SILVER ware may be kept bright and clean by coating the articles (warmed) with a solution of colodion diluted with alcohol.—*Scientific American*.

HOW TO CLEAN A TEA OR COFFEE POT.

If the inside of your tea or coffee pot is black from long use, fill it with water, throw in a piece of hard soap, set on the stove and let boil from half an hour to an hour. It will clean as bright as a new dollar and cost no work.

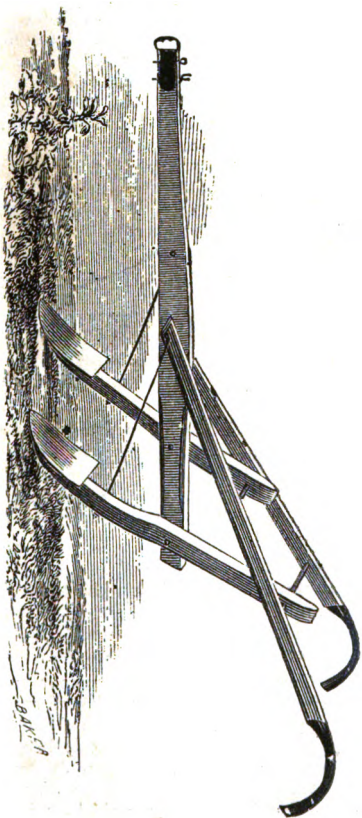
STONE jars which have become offensive and unfit for use, may be rendered perfectly sweet by packing them full of earth, and letting them stand two or three weeks.

TO REMOVE FRECKLES.

Strain horse radish into a cup of cold sour milk; let it stand twelve hours, strain and apply two or three times a day. Or, mix lemon juice, one ounce; pulverized borax, one-quarter drachm; sugar, one-half drachm; keep a few days in a glass bottle, then apply occasionally.

IMPORTANT TO OWNERS OF HORSES.

The following recipe will cure the worst cases of colic in horses: 1 ½ oz. Laudanum; 2 oz. Sulphate Ether; 1 oz. Tincture Asafoetida; ½ oz. Extract Ginger. Shake well and drench the horse.



WOOD BEAM DOUBLE SHOVEL PLOW.

The above cut represents our Wood Beam Double Shovel Plow. It is furnished with blades of same material and size as the Iron Beam. We also make them with straight Shovel Standards, set out with blocks.

CELERY.

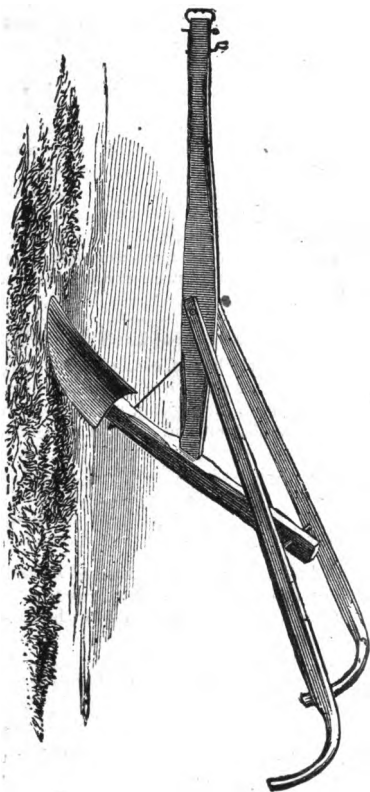
Here is an item about Celery, that we find going the rounds of the press, attributed to one "who is familiar with its virtues." Can any one corroborate the writer's opinion? "I have known many men, and women, too, who from various causes have become so much affected by nervousness and when they stretched out their hands they shook like aspen leaves on windy days, and by a moderate daily use of the blanched foot-stalks of celery as a salad, they became as strong and steady in limb as other people. I have known some so nervous that the least annoyance put them in a state of agitation, and they were in constant perplexity and fear, who were also effectually cured by a moderate daily use of blanched celery as a salad at meal time. I have known others cured of palpitation of the heart. Every body engaged in labor weakening to the nerves should use celery daily in the season, and onions in its stead when not in season."

A LITTLE black pepper in some cotton dipped in sweet oil, is one of the quickest remedies known for the earache.

A SMALL roll of soft paper, twisted up the size of a goose quill and forcibly pressed up, behind the upper lip, will nearly always cure the worst case of nose bleeding.

A GOOD way to clean black kid gloves is to take a teaspoonful of salad oil, drop a few drops of ink in it, and rub it over the gloves with the tip of a feather; then let them dry in the sun.—*Scientific American*.

THE German washerwomen use a mixture of 2 ozs. turpentine and 1 oz. spirits of ammonia well mixed together. This is put into a bucket of warm water, in which $\frac{1}{2}$ lb. soap has been dissolved. The clothes are immersed for twenty-four hours and then washed. The cleansing is said to be greatly quickened, and two or three rinsings in cold water remove the turpentine smell.

**SINGLE SHOVEL PLOW.**

This tool is made with Cast Steel Shovels, 11 or 13 inches wide. It is very efficient in the Potato Patch, Corn Field, or other cultivation.

TO CLEAN PAINT.

I will give you a very simple method to clean paint that has become very dirty, every woman should adopt it for it saves much strength and time. Procure a plate with some of the best whiting; have ready some warm soap water and a piece of flannel, which dip into the water and squeeze almost dry. Now take as much whiting as will adhere to it. Apply it to the painted surface, when a little rubbing will instantly remove dirt or grease. Then wash with clean warm water, and dry with a soft chamois. If you clean paint in this way, it will look as well as when fresh painted, and will not injure the most delicate colors. It is a much better way than using soap and will not require more than half the time and labor. ●

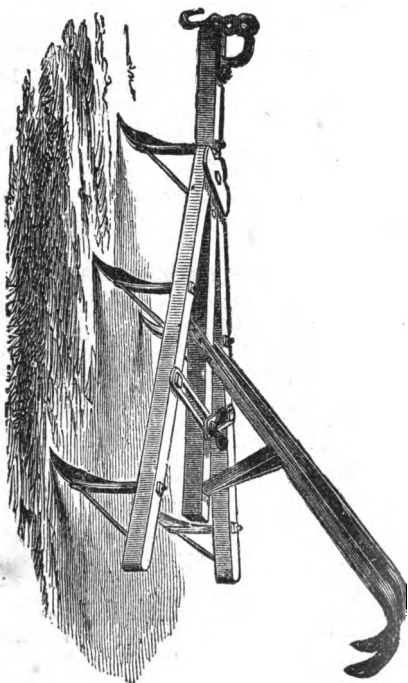
HOW TO DRESS MUTTON.

First, get a bucket of clean cold water, then hang your sheep up by the heels, cut its throat, and as soon as it quits struggling, cut a hole in the upper part of the abdomen and pour in the bucket of water, or as much of it as you can get in; then proceed to dress as quickly as possible. The cold water hardens the tallow on the inside, and thereby prevents the gases from the stomach escaping and injuring the meat.—C. J., in *Willamette Farmer*.

BLACK LEAD well mixed with white of egg is a good stove blacking. Lay on with a paint brush, and when dry polish with a hard brush.—*Scientific American*.

EQUAL proportions of turpentine, linseed oil, and vinegar, thoroughly applied and then rubbed with flannel, is an excellent furniture polish.

OLMSTED'S varnish, made by melting one part of rosin with ten parts of lard, will prevent rust or corrosion on sheet iron or other metal to which it is applied.



FIVE TOOTH CULTIVATOR.

This Cultivator can be set to different widths, and makes a very useful implement for cultivating corn, cotton, hops, potatoes, etc. The blades are made of cast steel and diamond shaped, and are attached to a wrought iron shank with brace. When one point is worn out, the blades can be reversed and the other point used.

SIMPLE RULE.

**For Accurately Computing Interest at any
Given per cent. for any Length of Time.**

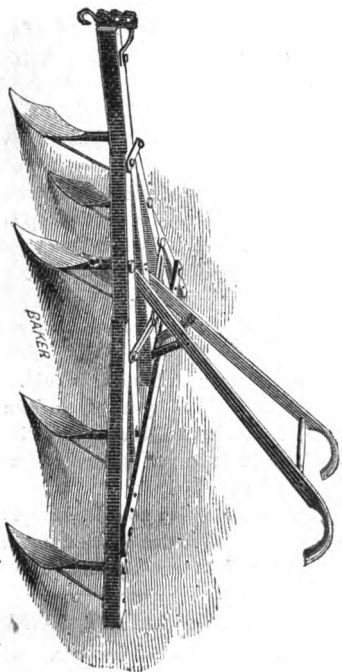
Multiply the *principal* (amount of money at interest) by the *time reduced to days*; then divide this product by the quotient obtained by dividing 360 (the number of days in the interest year) by the *per cent.* of interest, and the *quotient thus obtained* will be the required interest.

Illustration.

Require the interest of \$462.50 for one month and eighteen days, at 6 per cent. An interest month is 30 days; one month and eighteen days equal 48 days. \$462.50 multiplied by 48 gives \$222.0000; 360 divided by 6 (the per cent. of interest) gives 60, and 222.0000 divided by 60 gives you the exact interest, which is \$3.70. If the rate of interest in the above example were 12 per cent., we would divide the \$222.0000 by 30 (because 360 divided by 12 gives 30); if 4 per cent., we would divide by 90; if 8 per cent., by 45, and for a like manner for any other per cent.

Solution.

$$\begin{array}{r}
 \$462\ 50 \\
 \quad 48 \\
 \hline
 370000 \\
 6)360 \overline{)185000} \\
 \hline
 60) \$2220000 (\$3\ 70 \\
 \quad 180 \\
 \hline
 \quad 420 \\
 \quad 420 \\
 \hline
 \quad \quad 00
 \end{array}$$



SEVEN TOOTH CULTIVATOR.

This is a superior implement for the cultivation of fallow ground, and takes the place of the harrow, but is more thorough in its work. The teeth are diamond shaped and reversible, same as in the Five Tooth Cultivator. It can readily be changed to a Five Tooth Cultivator. We also make a Nine Tooth Cultivator, with greater capacity, but not changeable.

BUSINESS LAW.

Ignorance of the law excuses no one.

An agreement without consideration is void.

Signatures made with a lead pencil are good in law.

A receipt for money paid is not legally conclusive.

The acts of one partner bind all the others.

Contracts made on Sunday cannot be enforced.

A contract made with a minor is void.

A contract made with a lunatic is void.

Principals are responsible for the acts of their agents.

Agents are responsible to their principals for errors.

Each individual in a partnership is responsible for the whole amount of the debts of the firm.

A note given by a minor is void.

Notes bear interest only when so stated.

It is not legally necessary to say on a note "for value received."

A note drawn on Sunday is void.

A note obtained by fraud, or from a person in a state of intoxication, cannot be collected.

If a note be lost or stolen, it does not release the maker; he must pay it.

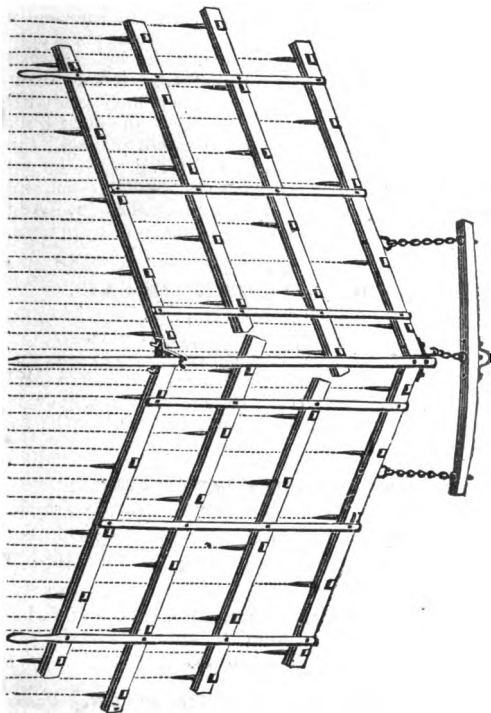
An endorser of a note is exempt from liability if not served with notice of its dishonor within twenty-four hours of its non-payment.

GRAHAM GEMS.

Take one quart Graham flour, one tablespoonful of sugar, one tablespoonful of lard, a small bit of salt and one-half teaspoonful of soda; buttermilk enough to make a thick batter. Have the gem irons hot and bake quick. This makes an excellent Graham gem and is not sticky.

FRIEDEMAN PATENT HARROW.

TWO SIZES, 10 and 12 feet wide.



Your attention is particularly called to the advantages of this new implement. It has been thoroughly tested and found to possess such superior advantages over any other Harrow in use, that it will be a boon to every farmer who uses it. It meets a want long felt; is light and strong, easily handled, will not upset in turning, easily cleared from trash, works splendidly in corn stalks, and does its work thoroughly. It has $\frac{3}{4}$ inch teeth; no danger of injuring the horses' heels. You can raise the center as well as the sides.

NICE BEAN PORRIDGE.

Take about two pounds of nice, sweet, well-cured corned beef; soak in cold water till sufficiently fresh; then wash and rinse it. Then take about one-half pint of small, sound, ripe, white beans; wash and rinse them; put the meat and beans into about six or eight quarts of water, and boil moderately till the beef is done through. Take out the meat from the pot, which should stand in a cool place till the skimmings rise. Remove this fat, and place the pot again over the fire; bring it to the boiling point and thicken with a little corn meal and boil again. Add black pepper and nice sweet butter to suit the taste.
—*Country Gentleman.*

TO MAKE CORN BREAD.

One pint of thick sour cream, one pint of milk, two eggs, one-half cup brown sugar or molasses, one teaspoonful of salt, one teaspoonful of saleratus (heaped) dissolved in a little hot water, Indian meal enough to make a thick batter; bake one hour in shallow tins. If cream cannot be had, use half a cup of butter or lard.

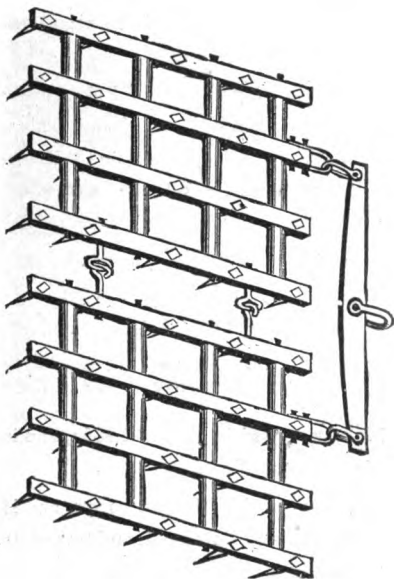
CORN GRIDDLE CAKES.

Turn one quart of boiling milk into a pint of corn meal; when lukewarm add three tablespoonfuls of flour, three eggs well beaten and a teaspoonful of salt. Bake on a griddle.

To preserve soap grease, fill a cask half full of good strong lye and drop all refuse grease therein. Stir up the mixture once a week.

SUMMER MINCE PIES.

One cup raisins, chopped fine, one nutmeg, two cups water, one tablespoonful cinnamon, two cups sugar, butter the size of an egg, one-half cup vinegar, eight crackers rolled fine; cook well together before baking.

**SCOTCH HARROW.**

These Harrows are well known and need no explanation. They are an excellent Harrow for any kind of land. They are made with $\frac{5}{8}$ inch teeth.

SULKY RAKE TEETH.

(See cut on opposite page.)

No. 1 was used in Rake in 1862 and 1863; it is a *round double coil wire* tooth.

No. 2 was used in part of Rakes made in 1864, and is a *single oval coil steel* tooth. This we cannot furnish, but the No. 4 can be used in its stead, or we can furnish the *single coil wire* tooth.

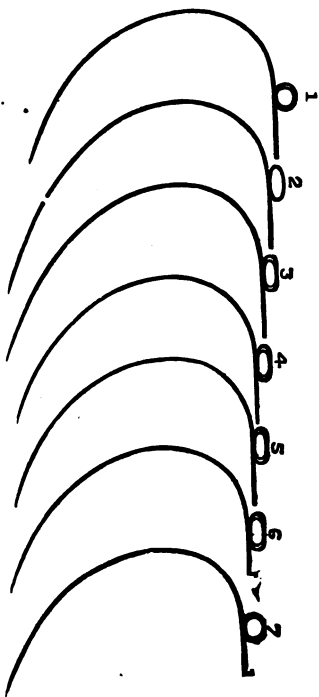
No. 3 was also used for part of Rakes made in 1864, and is a *double oval coil wire* tooth, six inches longer than any used since that date.

No. 4 was used in Rakes made in 1865, 1866 and 1867, and is a *double oval coil wire* tooth, shorter than No. 3.

No. 5 was used in 1868 and 1869, and is a *double oval coil cast steel* tooth.

No. 6 was used in 1870 and 1871, and is a *double oval coil cast steel* tooth, with end turned up.

No. 7 has been used since 1871, and is a *double round coil cast steel* tooth, with end turned up.



SULKY RAKE TEETH.

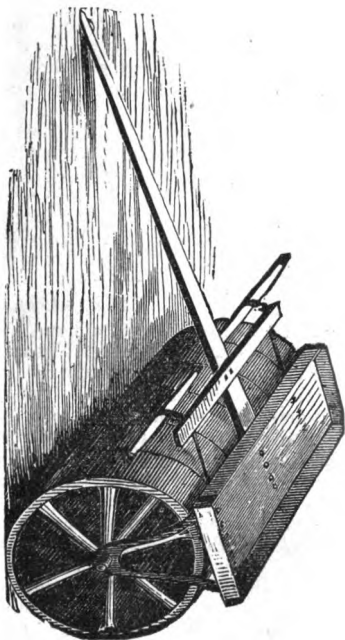
The above cut shows the kinds of Teeth we have used in our Sulky Rake at different times, and numbered for convenience in ordering. (For description see opposite page.)

USEFUL TABLE.**Quantity of Seeds Required per Acre.**

Wheat.....	1 ½ to 2 bushels.
Rye.....	1 ½ “
Oats.....	3 “
Barley.....	2 “
Peas.....	2 to 3 “
White Beans.....	1 ½ “
Buckwheat.....	½ “
Corn, Broadcast.....	4 “
Corn, in drills.....	2 to 3 “
Corn, in hills.....	4 to 8 quarts.
Broom Corn.....	½ bushel.
Potatoes.....	10 to 15 “
Beets.....	3 pounds.
Carrots.....	2 “
Ruta Bagas.....	¾ “
Millet.....	½ bushel.
Clover, white.....	4 quarts.
Clover, red.....	8 “
Timothy.....	6 “
Orchard Grass.....	2 bushels.
Red Top.....	1 to 2 pecks.
Blue Grass.....	2 bushels.
Mixed Lawn Grass.....	1 to 2 “
Tobacco.....	2 ounces.

BE willing to make a sacrifice in order to meet promptly all your engagements.

DON'T buy what you don't want.



FIELD ROLLER.

The above cut represents our Iron Field Roller with six sections, each section one foot in length. We make two sizes, 20 and 30 inches in diameter. We also make a Two Section Roller, 36 inches in diameter, with cast iron heads, covered with wood.

N. B.—We make Lawn Rollers to order, 20 or 30 inches in diameter, and can furnish castings for any of the above Rollers on notice,

POULTRY CHOLERA.

"Reader," Montmorency, Indiana, writes the following: "If you want your chickens to get well of the cholera in two days, use my remedy: Take good clear water and put in a bucket of any kind; then get white-oak bark (that from an old tree is the best,) put it in the water and let it steep until the water is of a copper color, and then pour it in your drinking-vessels or fountain, and do not let the fowls drink any other water. Give them their usual feed, and a cure will be effected in a short time. I have tried this for five years, and it has never failed."

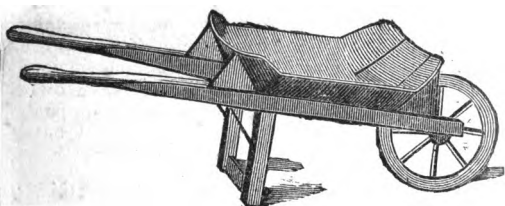
TO STOP HINGES FROM CREAKING.

A little soft soap put on barn door or gate hinges will prevent their creaking. But one application is needed. Try it.

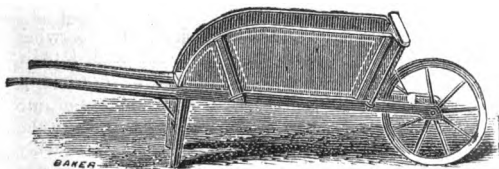
"STIR THE SOIL."

"If I had to preach a sermon on horticulture," says Downing, "I should take this for my text: 'stir the soil.'" In dry weather it is very essential that the soil be stirred often. The air waters the fresh dug soil much more effectually than we can do.

A man will raise more moisture with a spade and a hoe in a day than he can pour on the earth out of a watering pot in a week. If the ground be suffered to become close and compact, the cool surface exposed to the air for the reception of moisture is smaller, and what is deposited does not enter into the earth far enough to be appropriated; but if the soil be loose and porous the air enters more deeply and deposits its moisture beneath the surface. Almost any soil in which a seed will germinate, may be made by continued hoeing to produce a crop. Above all, cut away every weed that appears. "One year's seedling makes seven years' weeding." The only use of weeds is to make a necessity of tilling the ground more frequently.



RAILROAD BARROW.



GARDEN BARROW.

FARMERS AND RHEUMATISM.

Why are farmers so liable to rheumatism. Because they wear wet clothing, heat, and suddenly chill the body, over-eat after very hard work, and because they do not keep the skin in a vigorous, clean and healthy condition. If farmers would avoid suddenly cooling the body after hard exercise, if they would be careful not to go with wet clothing and wet feet, and if they would not over eat, when in an exhausted condition, and bathe daily, using much friction, they would have less rheumatism. The same rule applies to others than farmers. The Turkish bath is the best remedy for rheumatism.—*Science of Health.*

FOR BAD BREATH.

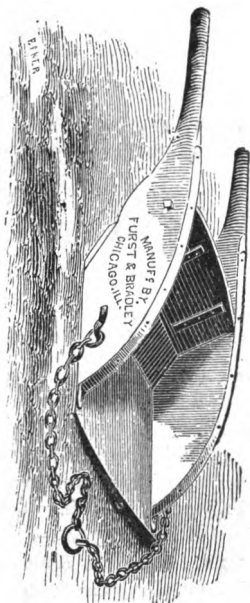
For bad breath here is a recipe: Three hours before breakfast take a teaspoonful of the following mixture: Chlorate of potassa, two drachms; sweetened water four ounces. Wash the mouth occasionally with the same mixture, and the breath will be as sweet as an infant's of two months.

GLUE, melted as usual, will keep liquid when cold, if a few drops of nitric acid are added to it. This is Spalding's Liquid Glue, and is very handy, if always kept in the house.

SEVEN pounds of sal soda, three of fresh slaked lime, five gallons of water, boiled till dissolved, then allowed to settle, and four gallons clear liquor poured off, to which is added, boiling hot, four pounds of clean grease and two ounces of powdered borax, will make a superior quality of hard white soap.

ROAD SCRAPERS.

We make this style of Scraper with Steel or Wrought Iron Bottoms, two sizes, 30 and 40 inches in width. They are used for all kinds of grading and Railroad work. We also make Cast Scrapers, two sizes, 26 and 28 inches.



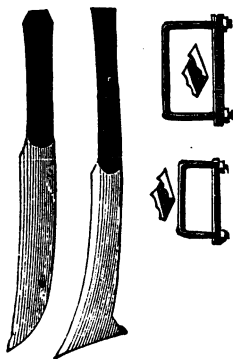
POPULATION OF THE WORLD.

Europe.....	280,000,000
Asia.....	800,000,000
Africa.....	150,000,000
North America.....	60,000,000
South America.....	20,000,000
Australia.....	2,000,000
Polynesia.....	1,500,000

A TABLE OF DAILY SAVINGS AT COMPOUND INTEREST.

<i>Per Day.</i>	<i>Per Year.</i>	<i>In Ten Years.</i>	<i>In Fifty Years.</i>
\$.02 $\frac{3}{4}$	\$ 10.00	\$ 130.00	\$ 2,900.00
.05 $\frac{1}{4}$	20.00	260.00	5,800.00
.11	40.00	520.00	11,600.00
.27 $\frac{1}{2}$	100.00	1,300.00	29,000.00
.55	200.00	2,600.00	58,000.00
1.10	400.00	5,200.00	116,000.00
1.37	500.00	6,500.00	145,000.00

By the above table it appears that if a mechanic or clerk saves only 23 $\frac{3}{4}$ cents per day, from the time he is twenty-one until he is three score and ten, the aggregate, with interest, will amount to \$2,900; and a daily saving of 27 $\frac{1}{2}$ cents reaches the important sum of \$29,000. A sixpence saved daily will provide a fund of nearly \$7,000—sufficient to purchase a good farm. There are few employes who cannot save daily, by abstaining from the use of cigars, tobacco, liquor, etc., twice or ten times the amount of the six cent piece. Every person should provide for old age, and the man in business who can lay by a dollar a day will eventually find himself possessed of over \$100,000.

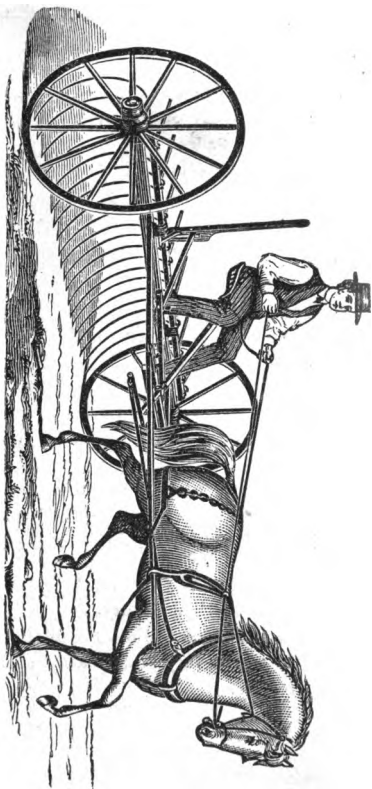


COULTERS.

The above cut shows the Standing and Knife Coulters, with different sizes of fastening or clasps to suit the size of Beam. The Knife Coulters is fastened to the Beam with Clasp, independent of the point of Plow, and is used on Old Ground Plows; while the Standing Coulters—so called—is attached to the point of Plow, and fastened to the Beam with clasp, and is used in stony or rooty ground on both the Old Ground and Breaking Plows. In addition to the above, we make both the Common Rolling and Castor Coulters.

TAKE CARE OF YOUR IMPLEMENTS.

A great many farmers are constantly grumbling about the high price of farming tools, asserting that the purchasing of such implements as they want keeps them continually in debt. So it does; but let us see where the fault lies. Our business takes us over the whole country, and we think we can safely say that not one farmer in ten takes decent care of his farm tools. Every day we see some implement lying just where it was last used, exposed to rain or snow. We have seen Mowers and Reapers left on the bottoms and in sloughs where they were used last, with the ice up to the hubs, frozen in solid. We have seen farmers plow up to their Mower, or Harvester, then move it on to the plowed ground instead of taking it under a shed, and go on with their work. And we have seen plows left in the ground just where a cold snap happened to stop their plowing. Such farmers need never expect to succeed. If they are *slack* in one thing, they are most always so in everything. The trouble is *not* that you have to pay so *much*, but that you have to pay so *often*. If you have no shed, buy five dollars worth of lumber, get four posts, stick them in the ground, and put hay enough on top to keep the rain and snow off your tools. Then oil over all steel or iron work to keep it from rusting, and your tools will last five times as long as they will otherwise. If, however, this is too much trouble, you can leave your tools out where they can rust and rot, and every year or two you will have to buy a new supply. You will soon owe everybody, your farm will be covered with mortgages, and you will finally be sold out and get your dues. Serves you right for your laziness.



FURST & BRADLEY'S SULKY RAKE.

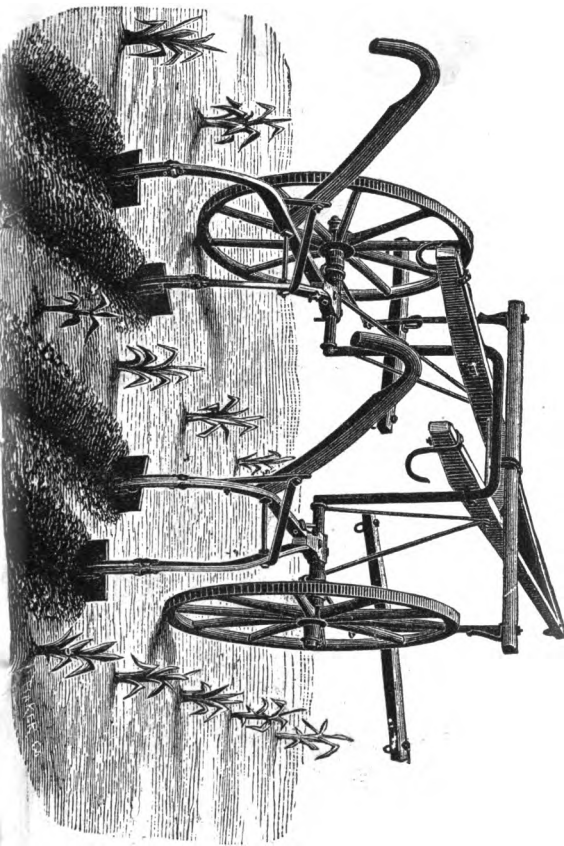
These Rakes are adapted for all kinds of raking, Hay, Grain, or Corn Stalks. For bunching or other heavy work, it has proved a great success. In simplicity and durability, as well as in the quality and quantity of work it performs, it excels all other rakes. The rakehead is independent of the axle, is adjustable to the different kinds of work, and is provided with 20 strong, independent *Cast Steel tempered* teeth. It is finished in nice style and made of selected material throughout. By proper handling, satisfaction is guaranteed.

The cut on next page illustrates our IRON BEAM WALKING CULTIVATOR. The frame is made of wrought iron, to which is attached a split tongue thoroughly braced in such a manner as to make it very strong, and at the same time very light. Our new coupling is superior to anything we have seen, for while it admits of a perfectly free motion, both laterally and up and down, it holds the plows perfectly solid, and prevents wobbling, and is so made as to wear equally on all sides. All the wearing parts can be easily adjusted and tightened. Wood beam plows are attached to this same frame when wanted.

These Cultivators are provided with Reversible Shovels, Break-pin Attachments, and other late improvements.

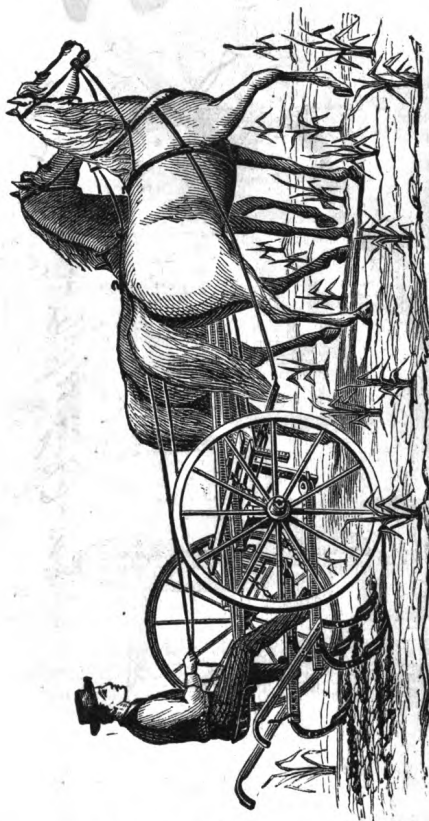
For the year 1877, the blocks on the shovels will be steel in place of malleable iron, and will be fastened on with bolts instead of rivets, as heretofore, so they can be taken off if necessary.

The material used in the construction of these cultivators is of the very best quality, and finished in excellent style.



IRON BEAM WALKING CULTIVATOR.

(For description see opposite page.)



GARDEN CITY RIDING OR WALKING CULTIVATOR COMBINED.
 Our Combined Garden City Cultivator has WROUGHT IRON SHANKS, to which are attached REVERSIBLE SHOVELS, adjustable up and down. The Shanks are provided with WOODEN BREAKPINS to guard against breakages. It has a convenient seat from which the plows can be moved to the right or left by the FEET. To change from riding to walking it is only necessary to LOWER the whiffletree rods, which will take the weight off the horses' necks. This machine contains all the latest improvements.

With Improved Coupling for 1877.



CALENDAR FOR 1877.

1877	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	1877	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
Jan.	...	1	2	3	4	5	6	July	1	2	3	4	5	6	7
	7	8	9	10	11	12	13		8	9	10	11	12	13	14
	14	15	16	17	18	19	20		15	16	17	18	19	20	21
	21	22	23	24	25	26	27		22	23	24	25	26	27	28
	28	29	30	31	...	...	...		29	30	31	...	...	...	...
Feb.	...	...	...	...	1	2	3	Aug.	...	...	...	1	2	3	4
	4	5	6	7	8	9	10		5	6	7	8	9	10	11
	11	12	13	14	15	16	17		12	13	14	15	16	17	18
	18	19	20	21	22	23	24		19	20	21	22	23	24	25
	25	26	27	28	...	...	...		26	27	28	29	30	31	...
Mar.	...	...	...	...	1	2	3	Sept.	...	...	...	...	...	...	1
	4	5	6	7	8	9	10		2	3	4	5	6	7	8
	11	12	13	14	15	16	17		9	10	11	12	13	14	15
	18	19	20	21	22	23	24		16	17	18	19	20	21	22
	25	26	27	28	29	30	31		23	24	25	26	27	28	29
Apr.	...	...	...	...	...	...	...	Oct.	30	...	...	...	...	...	...
	1	2	3	4	5	6	7		...	1	2	3	4	5	6
	8	9	10	11	12	13	14		7	8	9	10	11	12	13
	15	16	17	18	19	20	21		14	15	16	17	18	19	20
	22	23	24	25	26	27	28		21	22	23	24	25	26	27
	29	30	...	...	...	...	...		28	29	30	31	...	...	...
May	...	...	1	2	3	4	5	Nov.	...	...	...	...	1	2	3
	6	7	8	9	10	11	12		4	5	6	7	8	9	10
	13	14	15	16	17	18	19		11	12	13	14	15	16	17
	20	21	22	23	24	25	26		18	19	20	21	22	23	24
	27	28	29	30	31	...	...		25	26	27	28	29	30	...
June	...	...	...	...	...	1	2	Dec.	...	...	...	...	...	...	1
	3	4	5	6	7	8	9		2	3	4	5	6	7	8
	10	11	12	13	14	15	16		9	10	11	12	13	14	15
	17	18	19	20	21	22	23		16	17	18	19	20	21	22
	24	25	26	27	28	29	30		23	24	25	26	27	28	29
		30	31

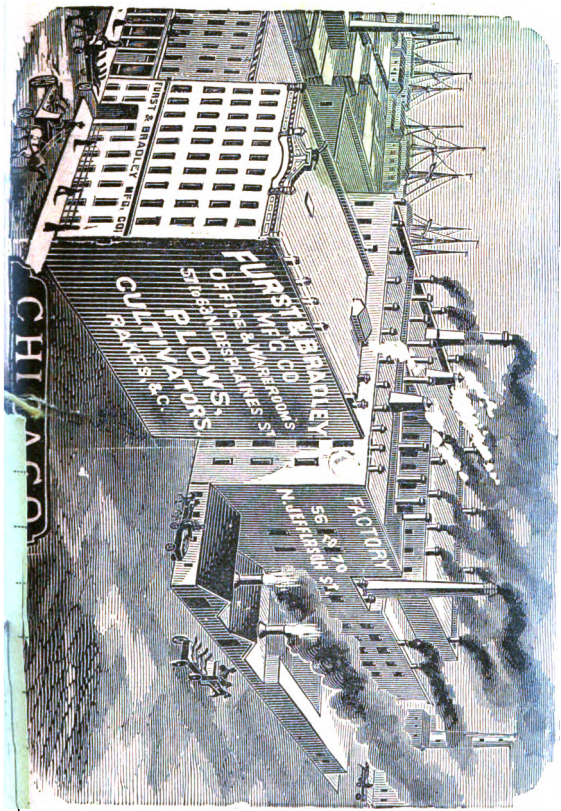
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